

Serial No. 10/809,708

List of Current Claims:

Claims 1 - 9 (Canceled)

10. (Currently Amended) The sonic-or ultrasonic flowmeter according to claim 9 17, wherein:

said first standard connector and said second standard connector are flanges or pipe sections, which are to be welded onto ends of the first pipe and the second pipe.

11. (Currently Amended) The sonic-or-ultrasonic flowmeter according to claim 9 17, wherein:

said sonic-or ultrasonic transducers are inserted in opposing bores in said pipe segment.

12. (Currently Amended) The sonic-or ultrasonic flowmeter according to claim 9 17, wherein:

said sonic-or ultrasonic transducers are mounted on opposing outside walls of said pipe segment.

Claims 13 - 16 (Canceled)

17. (New) A sonic- or ultrasonic flowmeter which replaces a differential pressure flowmeter, comprising:

a pipe segment connected to a first pipe and to a second pipe, each having a diameter, which complies with an industry standard for pipe diameters used in differential pressure flow measurement, a length, which is equal to a standard length for a flow restricting element of a differential pressure flowmeter, and a diameter, which is equal to a standard for pipe diameters used in differential pressure flow measurement;

Serial No. 10/809,708

a first standard connector located on a first end of said pipe segment and
a second standard connector located on a second end of said pipe segment;

a primary flow sensor, comprising at least one sonic- or ultrasonic
transducer for the transmission and/or reception of sonic- or ultrasonic signals across
said pipe segment, said at least one sonic- or ultrasonic transducer being mounted on
said pipe segment;

sensor electronics connected to said primary flow sensor for providing the
measurement signal representing a flow of a fluid through said pipe segment, based on
the sonic-or ultrasonic signals received by said sonic-or ultrasonic transducers;

a housing for said sensor electronics; and

a mounting section located on an outside wall of said housing for mounting
said housing apart from said pipe segment, said mounting section comprising two pairs
of threaded bores, wherein:

said threaded bores form a rectangle and their position is equal to a
position of threaded bores in the normal oval flanges of differential pressure transducers.

18. (New) A sonic- or ultrasonic flowmeter which replaces a differential pressure
flowmeter, comprising:

a pipe segment connected to a first pipe and to a second pipe, each having
a diameter, which complies with an industry standard for pipe diameters used in
differential pressure flow measurement, a length, which is equal to a standard length for
a flow restricting element of a differential pressure flowmeter, and a diameter, which is
equal to a standard for pipe diameters used in differential pressure flow measurement;

a first standard connector located on a first end of said pipe segment and
a second standard connector located on a second end of said pipe segment;

a primary flow sensor, comprising at least one sonic-or ultrasonic
transducer for the transmission and/or reception of sonic-or ultrasonic signals across
said pipe segment, said at least one sonic-or ultrasonic transducer being mounted on
said pipe segment;

sensor electronics connected to said primary flow sensor for providing the

Serial No. 10/809,708

measurement signal representing a flow of a fluid through said pipe segment, based on the sonic-or ultrasonic signals received by said sonic-or ultrasonic transducers;

a housing for said sensor electronics;

a mounting section located on an outside wall of said housing for mounting said housing apart from said pipe segment, said mounting section comprising two pairs of threaded bores; and

a cable connector for connecting said sonic-or ultrasonic transducers is located between said threaded bores of each pair of threaded bores, wherein

said threaded bores form a rectangle and their position is equal to a position of threaded bores in the normal oval flanges of differential pressure transducers.

19. (New) The sonic-or ultrasonic flowmeter according to claim 18, wherein:

said first standard connector and said second standard connector are flanges or pipe sections, which are to be welded onto ends of the first pipe and the second pipe.

20. (New) The sonic-or-ultrasonic flowmeter according to claim 18, wherein:

said sonic-or ultrasonic transducers are inserted in opposing bores in said pipe segment.

21. (New) The sonic-or ultrasonic flowmeter according to claim 18, wherein:

said sonic-or ultrasonic transducers are mounted on opposing outside walls of said pipe segment.